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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/965,537

09/26/2001

Jonathan Lacey

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08/12/2004

AGILENT TECHNOLOGIES, INC.

Legal Department, DL429

Intellectual Property Administration

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EXAMINER

PETKOVSEK, DANIEL J

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,537

Applicant(s)

LACEY, JONATHAN

Examiner

Daniel J Petkovsek

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment received June 7, 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 8, 9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 9 and 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 2, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This office action is in response to the amendment received June 7, 2004. In accordance with the amendment, claim 1 has been amended. Claims 4-7 and 10 have previously been canceled. Claims 1-3, 8, 9, and 11-20 are currently under examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8, 9, and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagahori et al. U.S.P. No. 5,896,213, and further in view of Geile et al. U.S.P. No. 6,336,201, and further in view of Liu et al. U.S.P. No. 5,485,465.

Nagahori et al. U.S.P. No. 5,896,213 teaches (ABS, Figs. 2, 4, and 5, summary, claim 1) an optical fiber network system comprising: an optical transmitter 6 for broadcasting an optical signal to a plurality of optical receivers 31-3N; a branching point 3 coupled to the transmitter including a 1xN element; and first and second individual optical transmission lines corresponding to particular end users. Nagahori et al. '213 does not explicitly teach that the branch element is 1x2, or the optical transmission lines are optical fiber cables surrounding fibers 51-5N.

Regardless, 1x2 splitters are well-known arrangements of optical networks since they create a greater number of signals to transmit to the customer/user. Geile et al. U.S.P. No. 6,336,201 teaches (column 21, line 60 through column 22, line 6) a fiber cable transmission

Art Unit: 2874

system that transmits optical signals to users by use of a branching point, in which it is taught that a tree of cascaded splitters can be used in any optical transmission network in order to further multiply the number of duplicated optical signals and thus increase the remote units serviceable by a single transmission signal. Any tree arrangement (1x2, 1x3, 1xN, etc) would have been reasonably suggested.

Since Nagahori et al. '213 and Geile et al. '201 are both from the same field of endeavor, the purpose of splitting the optical signal into a plurality of usable optical signals for desired end users, as disclosed by Geile et al. '201, would have been recognized in the pertinent art of Nagahori et al. '213.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a tree of splitters (such as 1x2, or other splitters) in the branching point of Nagahori et al. '213 for the purpose of sending this optical signal to a greater plurality of end users for the purpose of broadcasting the signal to more users for more economic growth capabilities.

Regarding the limitation that the optical transmission line is not an optical fiber cable, since cables are well known in the art to protect and envelop optical transmission lines, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use optical cables to protect the optical signals traveling to the end user, since cables are well-known forms of transmission lines in the art.

Nagahori et al. '213 does not explicitly teach a second cable to provide "route diversity" in the optical branching device.

Liu et al. U.S.P. No. 5,485,465 teaches (column 2, line 52 through column 3, line 9, column 5, lines 33-41) a broadcast network in which redundancy control is used, particularly in which a second fiber optical cable is used as a protection/redundancy line. This second optical fiber protection line implements “route diversity” of the optical broadcast system since any errors or losses of signal result in a switching to the second optical fiber cable to ensure that the broadcast signal is received by the end user(s).

Since Nagahori et al. ‘213 and Liu et al. ‘465 are both from the same field of endeavor, the purpose taught by Liu et al. ‘465, implementing “route diversity” by having a protection/redundant optical fiber cable, would have been recognized in the pertinent art of Nagahori et al. ‘213 in order to improve the functionality and error-control of the broadcast system.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to add a protection/redundant second optical fiber cable to the optical broadcast network of Nagahori et al. ‘213 for the purpose of decreasing error, keeping optical signals, improving end user functionality, etc., as taught by Liu et al. ‘465.

Regarding claims 2 and 3, the network is arranged as a star, and has buses. Regarding claim 8, the branching is located in central office or in a “field”. Regarding claims 11 and 12, there is a plurality of optical receivers. Regarding claims 13-16, these components are well-known in any optical routing system, although not explicitly disclosed. Regarding claim 17, all optical fibers have signals.

Regarding method claims 18-20, the methods are reasonably suggested (for the same reasons as claim 1 is rejected) by the combination of the references above.

Response to Arguments

3. Applicant's arguments filed June 7, 2004 have been fully considered.

Applicant traverses the rejections to claims 1-3, 8, 9, and 11-20 to Nagahori et al '213, in further view of Geile et al. '201, by stating that Nagahori et al '213 does not explicitly teach route diversity by use of a second optical fiber cable. The Examiner has searched for a tertiary reference (Liu et al '465) that teaches, in an optical broadcast network, that it is beneficial to provide route diversity by using a second/protection/redundant fiber cable in case of an error/break in the first cable.

Applicant's arguments toward the 35 U.S.C. 102(b) rejections to Wagner '983 have been considered, and are persuasive. The rejections to claims 1-3, 8, 9, and 11-20 to Wagner have been withdrawn.

Since a new grounds of rejection have been made to claims 1-3, 8, 9, and 11-20, this action is made **NON-FINAL**.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to the state of the art of protection/redundancy in optical cable systems: PTO-892 form references B and C.

Since a new grounds of rejection have been made to claims 1-3, 8, 9, and 11-20, this action is made **NON-FINAL**.

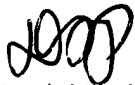
Art Unit: 2874

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (571) 272-2355.

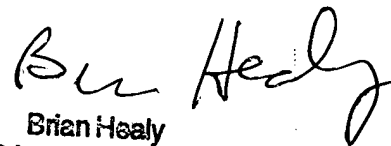
The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Petkovsek
August 10, 2004



Brian Healy
Primary Examiner